May 13, 2003
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# Facilitating the Digital Migration: The Future of U.S. Telecommunications Regulation

## Introduction

Across the globe, the telecommunications sector is emerging from the so-called "telecom meltdown." Today's climate is more sober and one in which venture capitalists ask hard questions of companies about revenue-generation and demand for products and services. It is a far cry from the heady days of the dot.com boom. In this more subdued environment, long-term trends are emerging from the clearing clouds of "irrational exuberance." One critical trend tested and found valid by the dot.com bomb is the long-predicted arrival of technological convergence.

Despite the telecom industry's crisis and corresponding gloom about it in the financial markets, technology has continued to advance and evidence abounds of the continuing underlying promise of the sector. Mobile phone penetration in the United States is rising – reaching 49% in 2002. 80% of Americans live in areas with 4 or more wireless operators. As commercial offerings increasingly mimic the flat-rate local calling plans familiar to U.S. consumers, cellular phones are even beginning to replace the traditional wireline family phone. Internet usage continues to grow. 60% of U.S. households have internet access. 98% of U.S. schools are connected to the internet. Broadband is increasingly available to residential American users. Cable modem and DSL broadband services are expected to be available to 90% of U.S. households by 2004. Today, 13% of U.S. households subscribe to these services. High speed lines connecting homes and businesses increased nearly 33% in the second half of 2002 to a total of 16 million lines. Of these, 14 % served residential customers and small businesses, with DSL service accounting for more than one–third of these lines and cable modem service for the remain two-thirds.

## Digital Migration

These trends are merely symptoms of a broader development: the telecom industry is on a digital migration. The digital migration is taking us from the old world of analog technologies, narrowband infrastructure, and regulatory models based on monopoly rights, to a new world, marked by digital technologies, broadband infrastructure and a pragmatic view of regulation.
In this new world, the "platforms" over which data travels – are uncoupled from the applications they provide. Unlike the platforms that provided traditional telephony or cable television, broadband platforms are not solely designed to deliver one particular application. They can be a conduit for an infinite number of innovative services.

We are moving past the "one-pipe only" world of twisted-copper pairs, coaxial cable or over-the-air television, into a world of multiple pipes that includes DSL, cable modem, powerline, wifi, satellite, and fiber. In time, this will mean that consumers will control their "personal communications space."

The digital migration will result in a competitive landscape characterized by the availability of services and differentiated products at the right price—without the heavy hand of regulation. Indeed, the role of the regulator, and of regulation itself, needs to be reconsidered in the emerging world of convergence. Traditional regulation is predicated on the "one-pipe" model and on spectrum scarcity as unavoidable facts of life. It is increasingly clear that the "new world" will be based on very different facts and will require a completely different approach. In the "new world" regulation will be grounded in the realities of technology, not in old delivery infrastructures.

Role of the Regulator

At the FCC, we are asking "what is the role of the regulator as old paradigms fall away?" We know that the FCC needs to pursue its regulatory mandate so that companies and investors can make informed decisions based on sound guiding principles. And we know we must respond to the challenges presented by the decline in the telecom sector. Yet, no government agency can allocate resources, punish waste or spur innovation as efficiently as the marketplace.

The answer to the question is that the FCC recognizes it has a critical regulatory role in ensuring that markets are open to competition, but that it must also rely on market forces--in lieu of regulatory mandates--wherever possible. In my remaining remarks, I'd like to focus on those policy mandates that are uniquely the responsibility of the FCC in its role as an independent regulator.

First, it is important to outline explicitly what that role is in the context of telecommunications regulation. First and foremost, it is to be, and be perceived to be, truly "independent." This means protecting the "public interest," not just commercial interests, and fulfilling the FCC's congressionally-mandated and unique role of regulating in the public interest through pro-competitive policies.

Other roles of the regulator include:

- Safeguarding continuity in essential telecommunications services;
- Explaining the key dynamics affecting the telecom industry to decision-makers in the commercial, political and social sectors;
- Encouraging investor confidence through providing transparent, predictable rulemaking processes, and quick and effective enforcement of those rules;
- Continuing to assess and re-assess regulatory policies in light of regulatory experience, as well as social, judicial and especially, technological, developments; and
- Refining regulatory approaches as necessary while maintaining an open and transparent set of procedures.

It is not the regulators job to "pick winners and losers," or to intervene in the market to subsidize (directly or indirectly) failing companies. Instead, the regulator must understand the technological innovations and market realities shaping the decision-making of service providers and investors. In addition, it must ensure that rules do not exacerbate existing problems or distort investment incentives.

I'd like to explore how these principles have been applied to issues identified by FCC Chairman Powell as priorities for 2003 in the areas of local competition, media ownership and spectrum management.

Local Competition: the U.S. Experience

At the FCC, our ongoing work on local competition illustrates the continuous cycle of pragmatic regulatory action, review and refinement. In the United States, the U.S. Congress sought in the 1996 telecommunications act to encourage local competition to mirror the robust competition in international and long-distance services that blossomed out of the 1984 breakup of AT&T. There has been real progress. Over 80% of incumbent lines have been approved for long-distance. Or, put another way, only 7 states, with less than one-fourth of the U.S. population, have yet to meet the state-by-state criteria required for lifting the long-distance prohibition on incumbents.

It is important to remember that implementation of the 1996 act's interconnection and unbundling requirements was a groundbreaking legal and regulatory challenge. As a result, the FCC's initial policies were somewhat theoretical. In February, the FCC adopted a revised policy in light of the last six years of experience implementing the 1996 act.

A key element in our reassessment is evidence of the growing importance in the U.S. market of inter-modal competition – that is, competition among providers that use wireline telephony, cable, wireless, fiber and satellite platforms. It is no longer sufficient to look only at one such “platform” to evaluate the competitive environment faced by firms in some markets.

At the heart of our competition agenda is the FCC’s recently adopted “triennial review,” which has its origins in a congressional edict that the FCC periodically review its competition and unbundling policy. But it is not easy for a regulatory agency to stay in sync with a market that is changed so frequently by technology. The communications services that competitors provide today bear little resemblance to those provided three years ago. The FCC’s competition policy must adjust for new kinds of competitive entrants and adapt accordingly.

To that end, the February 2003 triennial review decision on “unbundled network elements” adopts substantial unbundling relief for loops utilizing fiber facilities while maintaining appropriate regulatory requirements for old copper facilities. This new regulatory regime responds to the changing competitive environment in two, balanced ways:

First, where providers deploy entirely new fiber networks, they shed the cloak of incumbency, and exist in a regulation-free zone. Second, where incumbents have attached their fiber loops to copper networks, the FCC will not order incumbents to unbundle new packetized transport networks. However, the FCC will allow competitors that use incumbent networks to continue to do so at existing capacity levels. This compromise should pave the way for incumbents and competitors alike to deploy next-generation facilities to the benefit of downstream equipment suppliers and consumers.

Another major aspect of the decision concerns those facilities-based competitors serving the business market. The FCC has generally decided to unbundle the transport and other high-capacity pieces of the incumbents’ networks that serve business users. Importantly, the FCC will depend on its regulatory counterparts in state governments’ “public utility commissions” to ensure that this requirement is not overly broad. Where sufficient competition exists on a given transport route, the newly-adopted FCC rules empower these local regulators to make individualized, market-specific judgments that sufficient competition exists. The FCC is hopeful that this approach will achieve the necessary granularity of market analysis so that effective competitive decisions can be reached. Finally, the triennial review order asks the state public utility commissions to engage in proceedings to determine the future of residential phone competition using incumbents’ networks. While court challenges in this area are likely, the FCC is working with state public utility commissioners to ensure that residential phone competition is present.

Getting the details right is not easy task in evolving markets dominated by former monopolies, but increasingly shaped by new technologies. In the case of the triennial review, the ultimate order adopted by the FCC was controversial among the commissioners. This controversy focused on the degree of regulation required for local incumbents in their traditional markets. In emerging broadband markets, in contrast, there was wide agreement that a much less regulatory approach was warranted.

<u>Media Ownership</u>

As in Europe, convergence has necessitated a fresh approach to long-held media ownership issues in the United States. Broadcast policies have for decades been an important tool in promoting the cherished American principles of a well-equipped free press and a diverse, vibrant media that serves our local communities. Rules governing media ownership to ensure diverse output have always been preferred in the United States over regulating content directly. Recently, the FCC, as a result of several pivotal U.S. court decisions, initiated a public inquiry on our media regulatory framework in order to gain a more coherent and internally consistent set of rules.

Most broadcast rules in effect today were promulgated between 1940 and 1975. In this earlier era, the FCC was successful in crafting limited rules based primarily on reasonable assumptions about the interplay between ownership and editorial content. Those assumptions made sense because mass media itself was limited to the press, television, and radio. Under such circumstances, it was quite easy to accept as an article of faith the alleged harm of consolidation among the already scarce sources of new and information.

However, the question needs to be asked whether changes in the media landscape have undermined much of the rationale for limiting media ownership. The proliferation of media outlets and platforms has been accompanied by a virtual explosion in diverse content. Yet the FCC may have clung for too long, and too unthinkingly, to its old approaches.

This may now change. The FCC is wrestling with media issues anew. We are working hard to provide more rigorous evidence and rationales for the choices we make. We are working to bring greater coherence and consistency in order to achieve a simpler framework that still protects our ideals.

The effects of the digital migration are clearly shaping this effort. Media itself is changing as a new digital world unfolds. Convergence is accelerating the proliferation of information. The fact is, 85% of U.S. households subscribe to cable or satellite TV services. We see the internet itself becoming an essential source of important content. Satellite radio is in the market offering a hundred channels of diverse content. In the United States, "ABC news" has launched the first 24-hour broadband broadcasts. And the list goes on.

Against this reality, Chairman Powell is speaking out for a policy that allows sufficient flexibility to media outlets to bundle the products that they believe consumers desire, rather than relying on a policy based on a media ownership model rooted in the traditional broadcast world.

As a result of these dynamics, the FCC has opened inquiries into six separate sets of broadcast ownership rules – including rules on broadcast-newspaper cross-ownership; local radio ownership; television-radio cross-ownership rule; the dual network rule; the local television ownership rule; and, the national television ownership rule.

The FCC plans to act on these items next month.

<u>Spectrum Policy</u>

In the wireless world, the FCC has also focused on the issue of radio spectrum management, with its unique challenges. There is an increasing demand for access to spectrum. To meet the challenge, FCC Chairman Powell created the FCC spectrum policy task force in spring 2002 to conduct a comprehensive review of spectrum policies.

In its November 2002 report, the task force found that spectrum access is a much more significant problem than scarcity, and that technology is allowing systems to be much more tolerant to interference than in the past. It concluded that spectrum rights and responsibilities need to be clearly defined to better reflect market-based models and policies.

The Task Force also identified initiatives that could allow spectrum policy to keep pace with the relentless demands of the market. The Task Force report calls for a <u>migration toward more flexible, consumer-oriented policies</u>, including by providing incentives for efficient spectrum use by both licensed and unlicensed users through flexible rules and facilitating secondary markets. It encourages <u>adoption of quantitative standards (the so-called "interference temperature" measurement) to provide interference protection,</u> providing greater certainty for licensees and greater access to unused spectrum for unlicensed operators. The Task Force report also notes that technological developments now permit spectrum managers to use time, in addition to frequency, power and location, to permit more dynamic allocation and assignment of spectrum usage rights. This would provide access to unused or underused spectrum through time-sharing between multiple users and could lead to more efficient use of the spectrum resource.

Finally, the Task Force report recommends making greater use of both the "exclusive use" and "commons" models, limiting the use of the now-dominant "command-and-control" model to those instances of compelling public policy concern, such as with public safety applications, or where internationally harmonized spectrum is required.

FCC staff has consulted broadly with spectrum managers around the world on these ideas and looks forward to extending this discussion into international fora. Together, we can create an environment where technologies can be developed faster and deployed more rapidly in order to provide the spectrum-based services desired by consumers.

## Enforcement

Finally, I will end with a subject that underpins the effectiveness of all the federal communications commission's forward-thinking public policy decisions: that is, enforcement of its rules and decisions. Clearly, the FCC needs to ensure that it is empowered to employ a specific set of punitive deterrent measures, such as fines and license revocation, in order to enforce its regulatory decisions. It is not the FCC's role to address every conceivable enforcement challenge that may arise. Yet, competition cannot be relied on to allocate resources and maximize consumer welfare if FCC licensees are able to gain advantage by violating the FCC's rules with impunity. Thus, we have found that failure to engage in stringent enforcement breeds disrespect for the FCC's authority and undermines the agency's credibility.

To this end, in 1999 the FCC created an enforcement bureau, which handles formal complaints, offers a mediation program that has an increasingly high settlement rate and conducts confidential investigations. By negotiating substantial consent decrees and issuing relatively large fines, the bureau has taken important strides towards deterring anti-competitive conduct.

## Conclusion

In 2003, the FCC will continue to grapple with the full complexity of the issues identified by Chairman Powell as characterizing the "digital migration," from the old analog, narrowband world to the new digital, broadband world which is characterized by competition, and market-based spectrum and media policies.

Our aim is to set the best possible regulatory framework for the future, with the "public interest" always foremost in our mind.

We look forward to joining in productive discussions with our German and European colleagues as we navigate these issues in the months and years ahead.